

**CRYSTALLIZATION PROCESSING OF SEMICONDUCTOR FILM REGIONS ON A SUBSTRATE, AND DEVICES MADE THEREWITH****Publication number:** WO9745827**Publication date:** 1997-12-04**Inventor:** IM JAMES S (US); SONG HYUN JIN (US); SPOSILI ROBERT S (US); YOON JUNG H (US)**Applicant:** UNIV COLUMBIA (US); IM JAMES S (US); SONG HYUN JIN (US); SPOSILI ROBERT S (US); YOON JUNG H (US)**Classification:****- international:** C30B13/24; G02F1/136; G02F1/1368; H01L21/20; H01L21/30; H01L21/336; H01L29/786; C30B13/00; G02F1/13; H01L21/02; H01L29/66; (IPC1-7): G09G3/36; C30B13/06; H01L21/20; H01L21/302**- European:** C30B13/24; H01L21/20D2; H01L21/30**Application number:** WO1996US07730 19960528**Priority number(s):** WO1996US07730 19960528**Also published as:**

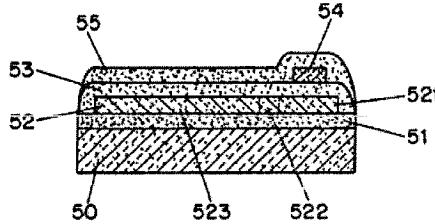
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**Cited documents:**

- US4382658
- USRE33836E
- US5204659
- US5061655
- US5409867

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Semiconductor integrated devices such as transistors are formed in a film of semiconductor material formed on a substrate. For improved device characteristics, the semiconductor material has regular, quasi-regular or single-crystal structure. Such a structure is made by a technique involving localized irradiation of the film with one or several pulses of a beam of laser radiation, locally to melt the film through its entire thickness. The molten material then solidifies laterally from a seed area of the film. The semiconductor devices can be included as pixel controllers and drivers in liquid-crystal display devices, and in image sensors, static random-access memories (SRAM), silicon-on-insulator (SOI) devices, and three-dimensional integrated circuit devices.

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